

## DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of subject matter (process, machine, manufacture, or composition of matter, or an improvement thereof) which is claimed and for which a patent is sought by way of the application entitled

**METHODS FOR IDENTIFYING NON-VOLATILE MEMORY ELEMENTS WITH POOR  
SUBTHRESHOLD SLOPE OR WEAK TRANSCONDUCTANCE**

which (check)  is attached hereto.

and is amended by the Preliminary Amendment attached hereto.

was filed on as Application Serial No.

and was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
Number	Country	Day/Month/Year Filed	Yes	No
N/A			<input type="checkbox"/>	<input type="checkbox"/>

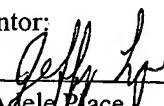
I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

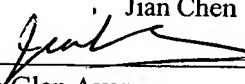
Provisional Application Number	Filing Date
N/A	

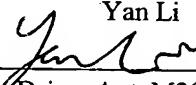
I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

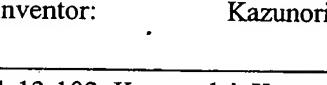
Application Serial No.	Filing Date	Status (patented, pending, abandoned)
N/A		

I declare that all statements made herein of my own knowledge are true, all statements made herein on information and belief are believed to be true, and all statements made herein are made with the knowledge that whoever, in any matter within the jurisdiction of the Patent and Trademark Office, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be subject to the penalties including fine or imprisonment or both as set forth under 18 U.S.C. 1001, and that violations of this paragraph may jeopardize the validity of the application or this document, or the validity or enforceability of any patent, trademark registration, or certificate resulting therefrom.

Full name of sole (or joint) inventor: Jeffrey W. Lutze  
 Inventor's Signature:   
 Residence: 1906 Avenida Place Date: 8/19/03  
 San Jose, CA 95125  
 Post Office Address: same as above Citizenship: U.S.A.

Full name of sole (or joint) inventor: Jian Chen  
 Inventor's Signature:   
 Residence: 5476 Castle Glen Avenue Date: 8/21/03  
 San Jose, CA 95129  
 Post Office Address: same as above Citizenship: U.S.A.

Full name of sole (or joint) inventor: Yan Li  
 Inventor's Signature:   
 Residence: 1775 Milmont Drive, Apt. M201 Date: 8/21/03  
 Milpitas, CA 95035  
 Post Office Address: same as above Citizenship: U.S.A.

Full name of sole (or joint) inventor: Kazunori Kanebako  
 Inventor's Signature:   
 Residence: 6-1-13-102, Kounandai, Kounan-Ku, Date: \_\_\_\_\_  
 Yokohama 234-0054, Japan  
 Post Office Address: same as above Citizenship: Japan

Full name of sole (or joint) inventor: Tomoharu Tanaka  
Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 2-13-21-105, Ookubo, Kounan-ku  
Yokohama, Japan  
Post Office Address: Citizenship: Japan

## DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of subject matter (process, machine, manufacture, or composition of matter, or an improvement thereof) which is claimed and for which a patent is sought by way of the application entitled

**METHODS FOR IDENTIFYING NON-VOLATILE MEMORY ELEMENTS WITH POOR  
SUBTHRESHOLD SLOPE OR WEAK TRANSCONDUCTANCE**

which (check)  is attached hereto.

and is amended by the Preliminary Amendment attached hereto.

was filed on as Application Serial No.

and was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
Number	Country	Day/Month/Year Filed	Yes	No
N/A			<input type="checkbox"/>	<input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

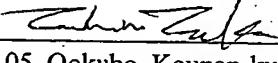
Provisional Application Number	Filing Date
N/A	

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status (patented, pending, abandoned)
N/A		

I declare that all statements made herein of my own knowledge are true, all statements made herein on information and belief are believed to be true, and all statements made herein are made with the knowledge that whoever, in any matter within the jurisdiction of the Patent and Trademark Office, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be subject to the penalties including fine or imprisonment or both as set forth under 18 U.S.C. 1001, and that violations of this paragraph may jeopardize the validity of the application or this document, or the validity or enforceability of any patent, trademark registration, or certificate resulting therefrom.

Full name of sole (or joint) inventor: Kazunori Kanebako  
Inventor's Signature: Kazunori Kanebako Date: Sept. 1, 2003  
Residence: 6-1-13-102, Kounandai, Kounan-Ku,  
Yokohama 234-0054, Japan  
Post Office Address: same as above Citizenship: Japan

Full name of sole (or joint) inventor: Tomoharu Tanaka  
Inventor's Signature:   
Residence: 2-13-21-105, Ookubo, Kounan-ku  
Post Office Address: Yokohama, Japan  
Date: August 25, 2003  
Citizenship: Japan

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Jeffrey W. Lutze, Jian Chen, Yan Li, Kazunori Kanebako, Tomoharu Tanaka

Assignee: SanDisk Corporation and Kabushiki Kaisha Toshiba

Title: METHODS FOR IDENTIFYING NON-VOLATILE MEMORY ELEMENTS WITH POOR SUBTHRESHOLD SLOPE OR WEAK TRANSCONDUCTANCE

Application No.: Unassigned Filing Date: Herewith

Examiner: Unassigned Group Art Unit: Unassigned

Docket No.: SNDK.301US0 Conf. No.: Unassigned

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COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

**POWER OF ATTORNEY BY ASSIGNEE**

Sir:

The above-identified assignee, SanDisk Corporation, a Delaware corporation, who has been assigned an interest in the patent application identified above, hereby appoints the attorney and identified by the following Customer Number to prosecute the above-identified application and to transact all business in the United States Patent and Trademark Office in connection therewith:

**Customer Number 36257**

Please direct all telephone calls to:

Michael G. Cleveland  
Telephone No.: (415) 318-1160  
Fax No.: (415) 693-0194

**ASSIGNEE CERTIFICATION UNDER 37 CFR 3.73(B)**

The undersigned representative of the above-identified assignee certifies that the above-identified assignee is the assignee of an interest in the above-identified patent application by virtue of a chain of title from one of the inventors of the above-identified patent application to the above-identified assignee as shown below:

From: Jeffrey W. Lutze, Jian Chen, and Yan Li To SanDisk Corporation for which a copy thereof is attached.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the above-identified assignee.

September 10, 2003

Date

Name: Charles Van Orden

Title: Vice President and General Counsel

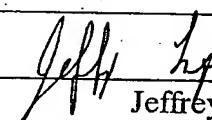
## ASSIGNMENT

For good and valuable consideration, receipt of which is hereby acknowledged, we, Jeffrey W. Lutze of San Jose, CA, Jian Chen of San Jose, CA, and Yan Li of Milpitas, CA, hereby sell, assign and transfer to SanDisk Corporation, a Delaware corporation, having a place of business at 140 Caspian Court, Sunnyvale, California, 94089, its successors and assigns, the entire right, title and interest throughout the world in our invention in:

### **METHODS FOR IDENTIFYING NON-VOLATILE MEMORY ELEMENTS WITH POOR SUBTHRESHOLD SLOPE OR WEAK TRANSCONDUCTANCE**

for which we have executed a United States patent application on or about the date of this assignment, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from us; we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, their successors, assigns and nominees, at their request and expense, in obtaining and enforcing patents for said invention in all countries; and we request that the United States Patent and Trademark Office issue all patents granted for said invention to the above-named assignee, its successors and assigns.

Executed this 19 day of August, 2003.



Jeffrey W. Lutze

State of \_\_\_\_\_

) ss

County of \_\_\_\_\_ )

On \_\_\_\_\_ before me, \_\_\_\_\_ personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
SIGNATURE OF NOTARY

Executed this 21<sup>st</sup> day of August, 2003.

  
Jian Chen

State of \_\_\_\_\_ )

County of \_\_\_\_\_ ) ss

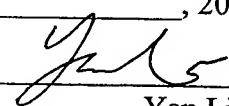
On \_\_\_\_\_ before me, \_\_\_\_\_ personally appeared \_\_\_\_\_ personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

---

SIGNATURE OF NOTARY

Executed this 21 day of August, 2003.

  
Yan Li

State of \_\_\_\_\_ )

County of \_\_\_\_\_ ) ss

On \_\_\_\_\_ before me, \_\_\_\_\_ personally appeared \_\_\_\_\_ personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

---

SIGNATURE OF NOTARY

RECORDATION FORM COVER SHEET  
PATENTS ONLY

TO THE HONORABLE DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE. PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

## 1. Name of conveying party(ies):

(a) Kazunori Kaneko  
(b) Tomoharu Tanaka

Additional name(s) of conveying party(ies) attached?

 Yes  No

## 3. Nature of Conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other

Execution Date: (a) 9/01/03 (b) 8/25/03

## 2. Name and address of receiving party(ies):

Name: Kabushiki Kaisha Toshiba  
 1-1, Shibaura 1-chome, Minato-ku  
 Tokyo  
 JAPAN

## Name and address of receiving party(ies):

Name:  
 Street Address:  
 City: State: Zip:  
 Country:

Additional name(s) & address(es) attached?  
 Yes  No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: 9/01/03, 8/25/03

## A. Patent Application No.(s) -

Title:

## B. Patent No.(s)

Additional numbers attached?  Yes  No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Michael G. Cleveland

Internal Address: Parsons Hsue &amp; de Rantz LLP

Street Address: 655 Montgomery Street, Suite 1800

City San Francisco State CA Zip 94111

## 6. Total number of applications and patents involved: 1

## 7. Total fee (37 CFR 3.41): \$40.00

 A check is enclosed that includes the total fee. Charge Deposit Account 502664 for any additional fees required for this conveyance and credit deposit account 502664 any amounts overpaid

DO NOT USE THIS SPACE

## 8. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Michael G. Cleveland, Reg. No.: 46,030  
Name of Person Signing

Signature

Sept. 17, 2003  
Date

Total number of pages, including cover sheet, attachments, and documents: 3

## ASSIGNMENT

For good and valuable consideration, receipt of which is hereby acknowledged, we, Kazunori Kanebako of Yokohama, Japan and Tomoharu Tanaka, of Yokohama, Japan, hereby sell, assign and transfer to Kabushiki Kaisha Toshiba, a Japanese corporation, having a place of business at 1-1, Shibaura 1-chome, Minato-ku, Tokyo, Japan, its successors and assigns, the entire right, title and interest throughout the world in our invention in:

### METHODS FOR IDENTIFYING NON-VOLATILE MEMORY ELEMENTS WITH POOR SUBTHRESHOLD SLOPE OR WEAK TRANSCONDUCTANCE

for which we have executed a United States patent application on or about the date of this assignment, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from us; we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, their successors, assigns and nominees, at their request and expense, in obtaining and enforcing patents for said invention in all countries; and we request that the United States Patent and Trademark Office issue all patents granted for said invention to the above-named assignee, its successors and assigns.

Executed this 1 day of Sept, 2003.

Kazunori Kanebako  
Kazunori Kanebako

State of \_\_\_\_\_ )

) ss

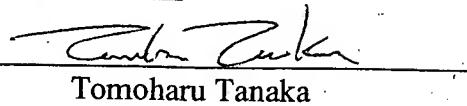
County of \_\_\_\_\_ )

On \_\_\_\_\_ before me, \_\_\_\_\_ personally appeared \_\_\_\_\_ personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
SIGNATURE OF NOTARY

Executed this 25 day of August, 2003.

  
Tomoharu Tanaka

State of   )

County of   ) ss

On \_\_\_\_\_ before me, \_\_\_\_\_ personally appeared \_\_\_\_\_ personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

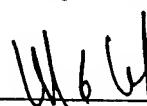
WITNESS my hand and official seal.

---

SIGNATURE OF NOTARY

RECORDATION FORM COVER SHEET  
PATENTS ONLY

TO THE HONORABLE DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE. PLEASE RECORD THE ATTACHED ORIGINAL DOCUMENTS OR COPY THEREOF.

1. Name of conveying party(ies):  (a) Jeffrey W. Lutze (b) Jian Chen (c) Yan Li		2. Name and address of receiving party(ies):  Name: SanDisk Corporation 140 Caspian Court Sunnyvale, CA94089 U.S.A.	
Additional name(s) of conveying party(ies) attached?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Name and address of receiving party(ies):  Name: Street Address: City: State: Zip: Country: Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of Conveyance:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other  Execution Date: (a) 8/19/03. (b) 8/21/03. (c) 8/21/03			
4. Application number(s) or patent number(s):  If this document is being filed together with a new application, the execution date of the application is: 8/19/03, 8/21/03, 8/21/03.			
A. Patent Application No.(s) -  Title:		B. Patent No.(s)	
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: <u>Michael G. Cleveland</u> Internal Address: <u>Parsons Hsue &amp; de Runtz LLP</u> Street Address: <u>655 Montgomery Street, Suite 1800</u> City <u>San Francisco</u> State <u>CA</u> Zip <u>94111</u>		6. Total number of applications and patents involved: <u>1</u>  7. Total fee (37.CFR 3.41): <u>\$40.00</u>  <input checked="" type="checkbox"/> A check is enclosed that includes the total fee. <input checked="" type="checkbox"/> Charge Deposit Account 502664 for any additional fees required for this conveyance and credit deposit account 502664. any amounts overpaid	
DO NOT USE THIS SPACE			
8. Statement and signature.  <i>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</i>			
Michael G. Cleveland, Reg. No.: 46,030 Name of Person Signing		 Signature	
		Sept. 17, 2002 Date	
Total number of pages including cover sheet, attachments, and documents: <u>3</u>			

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MAY 03 2004

Parsons Hsue & de Runtz LLP



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

APRIL 29, 2004

PTAS



\*102567792A\*

PARSONS HSUE & DE RUNTZ LLP  
MICHAEL G. CLEVELAND  
655 MONTGOMERY STREET  
SUITE 1800  
SAN FRANCISCO, CA 94111

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/17/2003

REEL/FRAME: 014542/0082  
NUMBER OF PAGES: 8

BRIEF: ASSIGNMENT OF ASSIGNEE'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNEE:

LUTZ, JEFFREY W.

DOC DATE: 08/19/2003

ASSIGNEE:

CHEN, JIAN

DOC DATE: 08/21/2003

ASSIGNEE:

LI, YAN

DOC DATE: 08/21/2003

ASSIGNEE:

SANDISK CORPORATION  
140 CASPIAN COURT  
SUNNYVALE, CALIFORNIA 94089

SERIAL NUMBER: 10665685  
PATENT NUMBER:

FILING DATE: 09/17/2003  
ISSUE DATE:

DIANE RUSSELE, PARALEGAL  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS